

**AMENDMENTS TO THE CLAIMS**

1        1. (currently amended)     A method of constructing a data pattern in a bit-error-  
2        rate test comprising:  
3                calculating an actual value using selected data of the data pattern;  
4                determining a desired value of the actual-value calculation using the selected  
5        data;  
6                determining a correction value to be applied to a portion of the selected data;  
7                performing an operation using the correction value and the portion of the  
8        selected data, thereby yielding a replacement value; and  
9                making the portion of the selected data equal to the replacement value, thereby  
10      yielding adjusted selected data.

1        2. (original)    The method of claim 1, wherein:  
2                the data pattern comprises a data loop;  
3                the desired value is stored in a first frame of the data loop; and  
4                the actual value is a function of the content of a preceding frame of the data  
5        loop.

1        3. (original)    The method of claim 2, wherein the data pattern comprises binary data  
2        and the step of determining the correction value comprises performing an exclusive-Or  
3        operation of the actual value and the desired value.

1           4. (original) The method of claim 3, wherein the step of performing the operation  
2   comprises performing an exclusive-Or operation of the correction value and the portion of the  
3   selected data.

1           5. (original) The method of claim 4, wherein the data pattern is used for time-  
2   domain testing.

1           6. (original) The method of claim 5, wherein the time-domain testing comprises bit-  
2   error-rate testing.

1           7. (original) The method of claim 4, wherein the data pattern is used for frequency-  
2   domain testing.

1           8. (original) The method of claim 7, wherein the frequency-domain testing  
2   comprises spectrum analysis.

1           9. (original) The method of claim 4, wherein the data pattern comprises at least one  
2   Synchronous Optical Network (SONET) frame.

1           10. (original) The method of claim 9, wherein the step of calculating comprises  
2   performing a Bit Interlace Parity (BIP) calculation.

1           11. (original) The method of claim 10, wherein:  
2                   the data pattern comprises at least a last frame and a first frame;  
3                   the desired value is stored in the first frame;  
4                   the actual value is calculated on the last frame.

1           12. (original) The method of claim 10, wherein the data pattern comprises a plurality  
2       of frames and a plurality of the plurality of frames include identical B bytes.

1           13. (original) The method of claim 11, wherein the last frame and the first frame are  
2       the same frame.

1           14. (original) The method of claim 10, wherein the desired value comprises at least  
2       one of a SONET B2 byte, a SONET B3 byte, and a SONET B1 byte.

1           15. (original) The method of claim 9, wherein the number of frames in the data  
2       pattern equals one.

1           16. (original) The method of claim 4, wherein the data pattern comprises at least one  
2       Synchronous Digital Hierarchy (SDH) frame.

1           17. (original) The method of claim 16, wherein the step of calculating comprises  
2       performing a Bit Interlace Parity (BIP) calculation.

1           18. (original) The method of claim 17, wherein:  
2               the data pattern comprises at least a last frame and a first frame;  
3               the desired value is stored in the first frame;  
4               the actual value is calculated on the last frame.

1           19. (original) The method of claim 17, wherein the data pattern comprises a plurality  
2       of frames and a plurality of the plurality of frames include identical B bytes.

1           20. (original) The method of claim 18, wherein the last frame and the first frame are  
2    the same frame.

1           21. (original) The method of claim 17, wherein the desired value comprises at least  
2    one of a SDH B2 byte, a SDH B3 byte, and a SDH B1 byte.

1           22. (original) The method of claim 1, further comprising:

2               calculating a second actual value using second selected data of the data  
3    pattern;

4               determining a second desired value of the second-actual-value calculation  
5    using the second selected data;

6               determining a second correction value to be applied to a portion of the second  
7    selected data;

8               performing an operation using the second correction value and the portion of  
9    the second selected data, thereby yielding a second replacement value; and

10              making the portion of the second selected data equal to the second  
11    replacement value, thereby yielding adjusted second selected data.

1           23. (original) The method of claim 22, wherein the step of determining the second  
2    correction value comprises performing an exclusive-Or operation of the second actual value  
3    and the second desired value.

1           24. (original) The method of claim 23, wherein the step of performing the operation  
2    using the second correction value comprises performing an exclusive-Or operation of the  
3    second correction value and the portion of the second selected data.

1           25. (previously presented) The method of claim 24, wherein the second selected  
2        data and the portion of the second selected data are mutually exclusive.

1           26. (original) The method of claim 1, wherein the selected data is selected from a  
2        single frame of the data pattern.

1           27. (original) The method of claim 1, further comprising calculating an adjusted  
2        actual value using the adjusted selected data, wherein the adjusted actual value equals the  
3        desired value.

1           28. (original) The method of claim 1, wherein the step of determining the correction  
2        value comprises performing an exclusive-Or operation of the actual value and the desired  
3        value.

1           29. (original) The method of claim 1, wherein the step of performing the operation  
2        comprises performing an exclusive-Or operation of the correction value and the portion of the  
3        selected data.

1           30. (original) An error-rate test system comprising:  
2                a pattern generator adapted to input a finite data pattern comprising at least  
3        one frame to a device under test, wherein the device under test sequentially processes and  
4        outputs data of the input finite data pattern;  
5                wherein a correction value comprises the result of an exclusive-Or operation  
6        of an actual value and a desired value of a calculation performed on a selected portion of at  
7        least one frame of the finite data pattern;

8                   wherein a replacement value comprises an exclusive-Or operation of the  
9    correction value and a portion of the selected portion; and  
10                  wherein the portion of the selected portion is made equal to the replacement  
11    value.

1           31. (original) The system of claim 30, wherein the data pattern comprises at least one  
2    Synchronous Optical Network (SONET) frame.

1           32. (original) The system of claim 31, wherein the actual value comprises the result  
2    of a Bit Interlace Parity (BIP) calculation.

1           33. (original) The system of claim 32 wherein:  
2                  the data pattern comprises at least a last frame and a first frame;  
3                  the desired value is stored in the first frame;  
4                  the actual value is calculated on the last frame.

1           34. (original) The system of claim 30, wherein the data pattern comprises a plurality  
2    of frames and a plurality of the plurality of frames include identical B bytes.

1           35. (original) The system of claim 33, wherein the last frame and the first frame are  
2    the same frame.

1           36. (original) The system of claim 30, wherein the desired value comprises at least  
2    one of a SONET B2 byte, a SONET B3 byte, and a SONET B1 byte.

1           37. (original) The system of claim 30, wherein the number of frames in the data  
2    pattern equals one.

1           38. (original) The system of claim 30, wherein the data pattern comprises at least one  
2   Synchronous Digital Hierarchy (SDH) frame.

1           39. (original) The system of claim 38, wherein the actual value comprises the result  
2   of a Bit Interlace Parity (BIP) calculation.

1           40. (original) The system of claim 39, wherein:  
2               the data pattern comprises at least a last frame and a first frame;  
3               the desired value is stored in the first frame;  
4               the actual value is calculated on the last frame.

1           41. (original) The system of claim 38, wherein the data pattern comprises a plurality  
2   of frames and a plurality of the plurality of frames include identical B bytes.

1           42. (original) The system of claim 40, wherein the last frame and the first frame are  
2   the same frame.

1           43. (original) The system of claim 30, wherein the desired value comprises at least  
2   one of a SDH B2 byte, a SDH B3 byte, and a SDH B1 byte.

1           44. (original) The system of claim 30, wherein:  
2               a second actual value is calculated using a second selected portion of the at  
3   least one frame;  
4               a second desired value of the second-actual-value calculation is determined  
5   using the second selected portion;

6                   a second correction value to be applied to a portion of the second selected  
7 portion is determined;

8                   an operation is performed using the second correction value and the portion of  
9 the second selected portion, the operation using the second correction value and the portion  
10 of the second selected portion yielding a second replacement value; and

11                  the portion of the second selected data is made equal to the second  
12 replacement value, thereby yielding an adjusted second selected portion.

1                  45. (original) The system of claim 44, wherein the determination of the second  
2 correction value comprises performing an exclusive-Or operation of the second actual value  
3 and the second desired value.

1                  46. (original) The system of claim 45, wherein the operation using the second  
2 correction value and the portion of the second selected portion comprises performing an  
3 exclusive-Or operation of the second correction value and the portion of the second selected  
4 portion.

1                  47. (original) The system of claim 46, wherein the selected portion and the portion of  
2 the second selected portion are mutually exclusive.

1                  48. (original) The system of claim 30, wherein the selected portion is selected from a  
2 single frame of the data pattern.

1                  49. (original) The system of claim 30, wherein an adjusted actual value using the  
2 adjusted selected data is calculated and the adjusted actual value equals the desired value.